

SeaKing 700 Series

Integrated oceanographic sensor suite



Integrate into a SeaKing network for accurate bathymetric data collection. The SeaKing Bathymetric System operates as a stand-alone instrument, or a single sub-sea node on the SeaKing network and shares the same twisted pair wiring as the SeaKing Profiler or SeaKing Sonar. Vehicle integration is very simple since only a single pair of conductors are required on the ROV.

The SeaKing Bathymetric system comprises up to four high resolution sensors - a depth sensor, conductivity probe, temperature probe and the PA500 altimeter. Two standard configurations are available, either as a pressure only package (SeaKing 701) or as a pressure, conductivity and temperature package (SeaKing 704).

The sensors form an integrated package, however, the PA500 altimeter is on a cable and can be mounted separately on the ROV which allows positioning of the individual sensors away from areas of masking or disturbance such as vehicle structure or thruster wash. For the SeaKing 704 full water column profiling is achieved by dynamically modifying a lookup table which contains all measured parameters versus depth. This table may be stored by the surveyors and re-loaded as required

Specifications

| | |
|--------------------------|-------------------------------|
| Product | SeaKing 700 Series |
| Country of origin | UK |
| Manufacturer | Tritech International Limited |

Features

- Real-time monitoring of conductivity
- Real-time monitoring of temperature
- Robust and proven design
- Reliable and accurate sensors
- 700m to 4000m depth ratings available

Benefits

- Configurable design
- Integrated compact unit
- Seamlessly combine with SeaKing network

Altimeter

| | |
|------------------------|---|
| Make | Tritech International |
| Type | PA500 |
| Weight in air | 1.15kg |
| Weight in water | 0.8kg |
| Frequency | 500kHz |
| Beamwidth | 6° conical |
| Range | 0.3 to 50m |
| Resolution | 1mm |
| Material | Stainless steel (titanium 6Al4V optional) |

System - physical

| | |
|------------------------|---|
| Weight in air | Aluminium: 3.5kg (4.2kg with CT probe) |
| Weight in water | Aluminium: 1.5kg (2.1kg with CT probe) |
| Materials | Anodised aluminium alloy (6Al4V titanium alloy or stainless steel optional) |

System - electrical

| | |
|--------------------------|-----------------------------|
| Power consumption | 24 -28V DC at 8VA (nominal) |
| Communications | ARCNET, RS232 |

Depth Sensor

| | |
|----------------------|---------------------------|
| Repeatability | Paroscientific Digiquartz |
| Repeatability | 0.01% FSD |
| Hysteresis | 0.015% FSD |
| Drift | 0.015% FSD |

Temperature Sensor

| | |
|-----------------|------------------------------------|
| Make | Teledyne RDI (Falmouth Scientific) |
| Type | Platinum Resistance |
| Range | -5 to 25°C |
| Accuracy | ±0.05°C |
| Drift | ±0.005°C per month |

Conductivity Sensor

| | |
|-----------------|------------------------------------|
| Make | Teledyne RDI (Falmouth Scientific) |
| Range | 0 to 6.5 S·m ⁻¹ |
| Accuracy | ±2.0mS·m ⁻¹ |
| Drift | ±0.5mS·m ⁻¹ per month |

